Title: Renewable Energy Sources as Inspiration for Physics Experiments

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Abstrakt: This thesis deals with a current issue of renewable resources of energy. It focuses on the Sun, wind and hydrogen as energy resources.The first part of the thesis provides a theoretical explanation to these resources and is followed by a practical part with the aim to explain this issue to students by using experiments included in worksheets.

The theoretical part is focused on the minimal knowledge that is needed for completing the worksheets. This part also describes suitability of these resources in the context of the Czech Republic. The second part of the thesis is exclusively experimental. It describes educational kits that can be used to demonstrate renewable resources of energy. It also includes instructions to create worksheets. The attachment, which is part of the thesis, contains a set of worksheets and a CD which, among others, contains other worksheets filled in by students.

Key words: renewable resources, worksheet, experiment, solar cell, fuel cell, wind turbine, efficiency